Each of the components 2104 to 2112 is typically connected to one or more of the other devices via a bus 2114 that in turn can consist of data, address, and control buses.

IN THE CLAIMS:

Please amend the claims as follows. All claims currently pending in the application, including those not amended, are reproduced below. A marked-up copy of the amended claims, showing the changes made thereto, is attached.

1. (Amended) A method for transforming a set of one or more closed first curves defining a boundary of a surface to a set of a plurality of closed loops, wherein the set of one or more closed first curves contains no self-crossover points, the method comprising the steps of:

providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

determining a set of crossover points from the determined set of intersection points; and

selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves in accordance with a predetermined rule to form the set of a plurality of closed

loops, whereby the set of a plurality of closed loops abuts a substantial portion of the boundary of the surface.

2. (Amended) A method as claimed in claim 1, wherein said selecting step comprises the substeps of:

ordering the set of crossover points in accordance with a predetermined order;

marking one of the crossover points that is highest in the predetermined order and that has not been previously marked;

determining if a last marked crossover point is a first point in a closed loop, and if so:

selecting a curve interval starting at the first point and terminating at an unmarked crossover point; and

marking the terminating crossover point of the selected curve interval; or if not:

selecting a curve interval starting at the previous terminating crossover point and terminating at an unmarked crossover point; and

marking the current terminating crossover point of the selected curve interval;

repetitively performing the determining substep until the closed loop is formed; and

repetitively performing the marking, determining and repetitively performing substeps until all possible closed loops have been formed.

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3. (Amended) A method as claimed in claim 2, wherein when it is determined in said determining substep that the last marked crossover point is a first point in a closed loop, the curve interval is selected from the set of one or more closed first curves, wherein the selected curve interval starts at the first point, continues in a first direction, and terminates at a next adjacent unmarked crossover point.

4. (Amended) A method as claimed in claim 2, wherein when it is determined in said determining substep that the last marked crossover point is not a first point in a closed loop, the curve interval is selected from the set of one or more closed first curves or the set of continuous second curves, wherein the selected curve interval is the first curve interval located in a second direction from the previously selected curve interval and which continues in a third direction and terminates at a next adjacent unmarked crossover point.

5. (Amended) A method as claimed in claim 2, wherein said substep of ordering the set of crossover points comprises ordering the crossover points according to their position along the set of one or more closed first curves in a fourth direction.

6. (Amended) A method as claimed in claim 5, wherein the first direction and the fourth direction are in a forward direction, the third direction is either in a positive or a negative direction, and the second direction is in a backward direction.

7. (Amended) A method as claimed in claim 5, wherein the first direction and the fourth direction are in a backward direction, the third direction is either in a positive or a negative direction, and the second direction is in a forward direction.

8. (Amended) A method as claimed in claim 1, wherein the surface is a 2-dimensional surface.

9. (Amended) A method as claimed in claim 1, wherein the surface is a 3-dimensional surface.

10. (Amended) A method as claimed in claim 1, wherein said step of selecting curve intervals comprises the substep of filling the plurality of closed loops with a predetermined color.

11. (Amended) A method as claimed in claim 1, wherein said step of providing a set of continuous second curves, comprises the substep of generating the set of continuous second curves.

12. (Amended) A method as claimed in claim 1, wherein said step of providing a set of continuous second curves, comprises the substep of accessing the set of continuous second curves from storage.

13. (Amended) A method as claimed in claim 1, wherein said step of providing a set of continuous second curves, comprises the substep of selecting one of a plurality of sets of continuous second curves in response to user input.

14. (Amended) A method as claimed in claim 11, wherein said generating substep comprises inputting parameters.

15. (Amended) A method as claimed in claim 14, wherein the input parameters comprise one or more of the following: base shapes of the continuous second curves, a period of the continuous second curves, and an amplitude of the continuous second curves.

16. (Amended) A method as claimed in claim 15, wherein the amplitude of the continuous second curves varies throughout.

17. (Amended) A method as claimed in claim 1, wherein the set of one or more closed first curves constitutes a character glyph of a font.

18. (Amended) An apparatus for transforming a set of one or more closed first curves defining a boundary of a surface to a set of a plurality of closed loops, wherein the set of one or more first curves contains no self-crossover points, the apparatus comprising:

providing means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

first determining means for determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

second determining means for determining a set of crossover points from the set of intersection points; and

first selecting means for selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves in accordance with a predetermined rule to form the set of a plurality of closed loops, whereby the set of a plurality closed loops abuts a substantial portion of the boundary of the surface.

19. (Amended) An apparatus as claimed in claim 18, wherein said first selecting means comprises:

ordering means for ordering the set of crossover points in accordance with a predetermined order;

first marking means for marking one of the crossover points that is highest in the predetermined order and that has not been previously marked;

second selecting means for selecting a curve interval starting at a first point and terminating at an unmarked crossover point;

second marking means for marking the terminating crossover point of the selected curve interval;

third selecting means for selecting a curve interval starting at the previous terminating crossover point and terminating at an unmarked crossover point;

third determining means for determining if a last marked crossover point is the first point in a closed loop, and if so performing the operations of said second selecting means and said second marking means, or if not, performing the operations of said third selecting means and said second marking means;

means for repetitively performing the operations of said third determining means until the closed loop is formed; and

means for repetitively performing the operations of said first marking means and said third determining means until all possible closed loops have been formed.

20. (Amended) An apparatus as claimed in claim 19, wherein said second selecting means selects the curve interval from the set of one or more closed first curves, wherein the selected curve interval starts at the first point, continues in a first direction, and terminates at a next adjacent unmarked crossover point.

21. (Amended) An apparatus as claimed in claim 19, wherein said third selecting means selects the curve interval from the set of one or more closed first curves or the set of continuous second curves, wherein the selected curve interval is the first curve interval located in a second direction from the previously selected curve interval and which continues in a third direction and terminates at a next adjacent unmarked crossover point.

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22. (Amended) An apparatus as claimed in claim 19, wherein said ordering means orders the set of crossover points according to their position along the set of one or more closed first curves in a fourth direction.

23. (Amended) An apparatus as claimed in claim 22, wherein the first direction and the fourth direction are in a forward direction, the third direction is either in a positive or a negative direction, and the second direction is in a backward direction.

24. (Amended) An apparatus as claimed in claim 22, wherein the first direction and the fourth direction are in a backward direction, the third direction is either in a positive or a negative direction, and the second direction is in a forward direction.

25. (Amended) An apparatus as claimed in claim 18, wherein the surface is a 2-dimensional surface.

26. (Amended) An apparatus as claimed in claim 18, wherein the surface is a 3-dimensional surface.

27. (Amended) An apparatus as claimed in claim 18, wherein said first selecting means comprises means for filling the plurality of closed loops with a predetermined color.

28. (Amended) An apparatus as claimed in claim 18, wherein said providing means comprises means for generating the set of continuous second curves.

29. (Amended) An apparatus as claimed in claim 18, wherein said providing means comprises means for accessing the set of continuous second curves from storage.

30. (Amended) An apparatus as claimed in claim 18, wherein said providing means comprises means for selecting one of a plurality of sets of continuous second curves in response to user input.

31. (Amended) An apparatus as claimed in claim 28, wherein said generating means comprises means for inputting parameters.

32. (Amended) An apparatus as claimed in claim 31, wherein the input parameters comprise one or more of the following: base shapes of the continuous second curves, a period of the continuous second curves, and an amplitude of the continuous second curves.

33. (Amended) An apparatus as claimed in claim 32, wherein the amplitude of the continuous second curves varies throughout.

34. (Amended) An apparatus as claimed in claim 18, wherein the set of one or more closed first curves constitutes a character glyph of a font.

35. (Amended) A computer program product comprising a computer readable medium including a computer program for transforming a set of one or more closed first curves defining a boundary of a surface to a set of a plurality of closed loops, wherein the set of one or more first curves contains no self-crossover points, the computer program product comprising:

providing means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

first determining means for determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

second determining means for determining a set of crossover points from the set of intersection points; and

first selecting means for selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves in accordance with a predetermined rule to form the set of a plurality of closed loops, whereby the set of a plurality of closed loops abuts a substantial portion of the boundary of the surface.

36. (Amended) A computer program product as claimed in claim 35, wherein said first selecting means comprises:

ordering means for ordering the set of crossover points in accordance with a predetermined order;

first marking means for marking one of the crossover points that is highest in the predetermined order and that has not been previously marked;

second selecting means for selecting a curve interval starting at a first point and terminating at an unmarked crossover point;

second marking means for marking the terminating crossover point of the selected curve interval;

third selecting means for selecting a curve interval starting at the previous terminating crossover point and terminating at an unmarked crossover point;

third determining means for determining if the last marked crossover point is the first point in a closed loop, and if so performing the operations of said second selecting means and said second marking means, or if not, performing the operations of said third selecting means and said second marking means;

means for repetitively performing the operations of said third determining means until the closed loop is formed; and

means for repetitively performing the operations of said first marking means and said third determining means until all possible closed loops have been formed.

37. (Amended) A computer program product as claimed in claim 36, wherein said second selecting means selects the curve interval from the set of one or more closed first curves, wherein the selected curve interval starts at the first point, continues in a first direction, and terminates at a next adjacent unmarked crossover point.

38. (Amended) A computer program product as claimed in claim 36, wherein said third selecting means selects the curve interval from the set of one or more closed first curves or the set of continuous second curves, wherein the selected curve interval is the first curve interval located in a second direction from the previously selected curve interval and which continues in a third direction and terminates at a next adjacent unmarked crossover point.

39. (Amended) A computer program product as claimed in claim 36, wherein said ordering means orders the set of crossover points according to their position along the set of one or more closed first curves in a fourth direction.

40. (Amended) A computer program product as claimed in claim 39, wherein the first direction and the fourth direction are in a forward direction, the third direction is either in a positive or a negative direction, and the second direction is in a backward direction.

41. (Amended) A computer program product as claimed in claim 39, wherein the first direction and the fourth direction are in a backward direction, the third direction is either in a positive or a negative direction, and the second direction is in a forward direction.

42. (Amended) A computer program product as claimed in claim 35, wherein the surface is a 2-dimensional surface.

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43. (Amended) A computer program product as claimed in claim 35, wherein the surface is a 3-dimensional surface.

44. (Amended) A computer program product as claimed in claim 35, wherein said first selecting means comprises means for filling the plurality of closed loops with a predetermined color.

45. (Amended) A computer program product as claimed in claim 35, wherein said providing means comprises means for generating the set of continuous second curves.

46. (Amended) A computer program product as claimed in claim 35, wherein said providing means comprises means for retrieving the set of second curves from storage.

47. (Amended) A computer program product as claimed in claim 35, wherein said providing means comprises means for selecting one of a plurality of sets of continuous second curves in response to user input.

48. (Unchanged From Prior Version) A computer program product as claimed in claim 45, wherein said generating means comprises means for inputting parameters.

49. (Amended) A computer program product as claimed in claim 48, wherein said input parameters comprise one or more of the following: base shapes of the continuous second curves, a period of the continuous second curves, and an amplitude of the continuous second curves.

50. (Amended) A computer program product as claimed in claim 49, wherein the amplitude of the continuous second curves varies throughout.

51. (Amended) A computer program product as claimed in claim 35, wherein the set of one or more closed first curves constitutes a character glyph of a font.

52. (Amended) A method of modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one or more closed first curves contains no self-crossover points, the method comprises the steps of:

providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

determining a set of crossover points from the set of intersection points; and

selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves to form a set of closed third curves, wherein the set of closed third curves abuts a substantial portion of the boundary of the surface and forms a modified typeface, font, or character.

53. (Amended) An apparatus for modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one or more closed first curves contains no self-crossover points, the apparatus comprising:

means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

means for determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

means for determining a set of crossover points from the set of intersection points; and

means for selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves to form a set of closed third curves, wherein the set of closed third curves abuts a substantial portion of the boundary of the surface and forms a modified typeface, font, or character.

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54. (Amended) A computer program product comprising a computer readable medium including a computer program for modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one or more closed first curves contains no self-crossover points, the computer program product comprising:

means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

means for determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

means for determining a set of crossover points from the set of intersection points; and

means for selecting a plurality of curve intervals, delimited by the determined crossover points, from the set of one or more closed first curves and the set of continuous second curves to form a set of closed third curves, wherein the set of closed third curves abuts a substantial portion of the boundary of the surface and forms a modified typeface, font, or character.

55. (Amended) A method of modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one

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or more closed first curves contains no self-crossover points, the method comprises the steps of:

providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

determining a set of intersection points, wherein the intersection points are those points where the one or more closed first curves intersect the continuous second curves and which lie on the boundary of the surface;

determining a set of crossover points from the set of intersection points;

selecting unmarked adjacent crossover points from the set of determined crossover points to a form a closed loop;

marking the selected adjacent crossover points; and

repetitively performing the selecting and marking steps until a set of closed loops have been formed, wherein the set of closed loops abuts a substantial portion of the boundary of the surface and forms a modified typeface, font, or character.

56. (Amended) Apparatus for modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one or more closed first curves contains no self-crossover points, the apparatus comprising:

means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;

means for determining a set of intersection points, wherein the intersection points are those points where the one or more first curves intersect the continuous second curves and which lie on the boundary of the surface;

means for determining a set of crossover points from the set of intersection points;

means for selecting unmarked adjacent crossover points from the set of determined crossover points to a form a closed loop;

means for marking the selected adjacent crossover points; and

means for repetitively performing the operations of said selection means and said marking means until a set of closed loops have been formed, wherein the set of closed loops abuts a substantial portion of the boundary of the surface and forms a modified typeface, font, or character.

57. (Amended) A computer program product comprising a computer readable medium including a computer program for modifying a typeface, font, or character, wherein the typeface, font, or character comprises a set of one or more closed first curves defining a boundary of a surface of the typeface, font, or character, wherein the set of one or more closed first curves contains no self-crossover points, the computer program comprising:

means for providing a set of continuous second curves lying on the surface, wherein each of the continuous second curves intersects one or more of the closed first curves and the set of continuous second curves contains no self-crossover points;